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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/004,608	11/27/2001	Frederick Kiremidjian	SS-709-09	8190

7590 08/16/2005

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EXAMINER

AHMED, SALMAN

ART UNIT PAPER NUMBER

2666

DATE MAILED: 08/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/004,608

Applicant(s)

KIREMIDJIAN ET AL.

Examiner

Salman Ahmed

Art Unit

2666

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 November 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☒ Claim(s) 2-7 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### **Specification**

1. The disclosure is objected to because of the following informalities'.

Page 8, line 22, the docket number such as (Docket SS-709-07) should be deleted.

Page 8 line 23 the serial number such as (09/xxx,xxx) should be replaced with an actual U.S. Patent application serial number.

Page 8 line 25 the docket number such as (Docket SS-709-08) should be deleted.

Page 8 line 26 the serial number such as (09/xxx,xxx) should be replaced with an actual U.S. Patent application serial number.

Appropriate correction is required.

### **Claim Objections**

2. Claims 2-7 are objected to because of the following informalities:

Claim 2, line 29, "said network" should be changed to ---said hierarchical network---

Claim 3, line 5, "said network" should be changed to ---said hierarchical network---

Claim 4, line 14, "said network" should be changed to ---said hierarchical network---

Claim 5 line 28, "said network" should be changed to ---said hierarchical network---

Claim 6 line 3, "said network" should be changed to --said hierarchical network---

Claim 7, line 13, "said network" should be changed to --said hierarchical network---

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 2, 3, 4, 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Amplify.Net's "Solution for DSL Distributed IP Service Management", and in view of Kloth et al. (U.S. Patent No. 6870812), hereinafter referred to as Kloth.

In regards to claim 1 Amplify.Net's "Solution for DSL Distributed IP Service Management" teaches a method for controlling the movement of datapackets in a

hierarchical network, the method comprising the steps of: using a class-based queue (page 11 section *Class-based Queuing*) traffic shaper (Page 11 section *TrafficShaping Algorithm*) to enforce a plurality of service-level agreement policies on individual connection sessions by limiting a maximum data throughput for each connection in a hierarchical network; distinguishing in class-based queue traffic shaper amongst data packets according to at least of their respective source and destination Ip-addresses (page 9 section "*IP service Engine Description*").

In regards to claim 1 Amplify.Net's "Solution for DSL Distributed IP Service Management" does not explicitly teach limit checking in one clock cycle for an entire network hierarchy above a particular node to enforce plurality of service-level agreement policies according to respective source and destination Ip-addresses.

In regards to claim 1 Kloth teaches (column 3 lines 11-19) an access control list CAM (ACLCAM) contains masked flow information such as, for example, all or portions of IP source and/or destination addresses, protocol types, and the like. The ACLCAM provides single clock cycle accesses when performing lookups for each packet. The ACLCAM provides an N-bit index value in response to QoS lookups based upon the best match for the current packet.

It would have been obvious for one of ordinary skill in the art at the time when the invention was made to modify Amplify.Net's teaching by incorporating Kloth's teaching

of limit checking in one clock cycle for an entire network hierarchy above a particular node to enforce plurality of service-level agreement policies according to respective source and destination Ip-addresses. The motivation is that the ability of limit checking in one clock cycle for an entire network hierarchy above a particular node to enforce plurality of service-level agreement policies according to respective source and destination Ip-addresses would enable a Service Provider operator to offer its Subscribers a choice of class of services at varying bandwidth data rates and tariffs, as well as latency sensitive value added services, set either in a fixed or dynamic mode, while being able to provision and enforce policies with manage precision in a simple, yet flexible manner.

Regarding claims 2 and 5 Amplify.Net's "Solution for DSL Distributed IP Service Management" teaches a method for controlling the movement of data packets in a hierarchical network, the method comprising the steps of: associating a service-level policy that limits allowable bandwidths to particular nodes in a hierarchical network; classifying data packets moving through said hierarchical network according to a particular service-level policy (page 9, sadiron *"IP Service Engine Description"*), and managing all data packets moving through said hierarchical network from a queue in which each entry includes service-level policy bandwidth allowances for every hierarchical node in said network through which a corresponding data packet must pass (Page 11, section *"Class-based Queuing"* and *"Trafficshapping Algorithms"*).

Regarding claims 3 and 6, Amplify.net further discloses testing in parallel whether a particular data packet should be delayed in a buffer or sent along for every hierarchical node in said network through which it must pass (Page 11, section "*Class-based Queuing*" and "*Trafficshapping Algorithm*").

Regarding claims 4 and 7 Amplify.net further discloses constructing a single queue of entries associated with corresponding data packets passing through hierarchical network such that each entry includes a pointer to the actual packet and pointers to the corresponding hierarchical node that point to the data structure containing available bandwidth credits in network through which a corresponding data packet must pass. (Page 14, sadiron "*isurfcommander Module*").

5. Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Amplify.Net's "Solution for DSL Distributed IP Service Management", in view of Patel et al. (U.S. Patent No. 6,865,185 B1), hereinafter referred to as Patel.

Regarding claim 8, Amplify.Net's "Solution for DSL Distributed IP Service Management" discloses a network management system, comprising: a single queue comprising individual entries related to data packets circulating through network, and further related to all network nodes through which each must pass (page 11 section "Class-based queuing"), and a traffic-shaping cell (page 11 section "Trafficshapping Algorithm") providing for an inspection of each one of said individual entries and for outputting a

single decision whether to pass through or buffer each of data packets in all network nodes through which each must pass; wherein, means data packets in a buffer are delayed to enforce said service-level policy.

Regarding claim 8, Amplify.Net's "Solution for DSL Distributed IP Service Management" does not specifically point out to use a protocol processor providing for header inspection of data packets circulating through a network and providing for an information output comprising at least one of source Ip-address, destination Ip-address, port number, and application type; and a classifier connected to receive said information output and able to associate a particular data packet with a particular network node and a corresponding service-level policy bandwidth allowance.

Regarding claim 8, Patel discloses a protocol processor providing for header inspection of data packets circulating through a network and providing for an information output comprising at least one of source Ip-address, destination Ip-address, port number, and application type (inherently done when inserting labels or tags) in front of the data packets, Col. 2, lines 7-13), a classifier connected to retrieve said information output and able to associate a particular data packet with a particular network node and a corresponding service-level policy bandwidth allowance (Col. 2, lines 25-44).

Therefore, it would have been obvious for one of ordinary skill in the art at the time when the invention was made to include using a protocol processor providing for header



inspection of data packets circulating through a network and providing for an information output comprising at least one of source IP-address, destination Ip-address, port number, and application type; and a classifier connected to retrieve said information output and able to associate a particular data packet with a particular network node and a corresponding service-level policy bandwidth allowance as taught by Patel et al. in the assembly of Amplify.net in order to complete an efficient network management system.

Regarding claim 9, in addition to the 103 rejection for claim 11 as stated above, Amplify.Net's "Solution for DSL Distributed IP Service Management" further discloses an output scheduler and marker for identifying particular ones of the individual entries in the single queue that are to be passed through or buffer (Page 11, section "*Class-based Queuing*" and "*Traicshapping Algorithms*").

6. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over (Amplify.net's "Solution for DSL Distributed IP Service Management", in view of Patel, as applied to claim 8 above), and in view of Everdell et al. (U.S. Patent Application No. 20020165961), hereinafter referred to as Everdell.

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Regarding claims 10, Amplify.Net and Patel (as stated above in 103(a) rejection for claim 8) teach a management system having a protocol processor, a classifier, and traffic-shaping cell.

Regarding claims 10, Amplify.Net and Patel do not teach having at least one of the protocol processor, classifier, and traffic-shaping cell, being implemented as a semiconductor intellectual property and operate at run-time with the single queue.

However, the use of semiconductor intellectual property to perform the above functions is well known in the art, Everdell teaches the use of a traffic management chips to perform upper level traffic management within the network device (inherently a semiconductor intellectual property; (0709)).

Therefore, it would have been obvious for one of ordinary skill in the art at the time when the invention was made to modify Amplify.Net and Patel's teaching by incorporating Everdell's teaching of at least one of the protocol processor, classifier, and traffic-shaping cell, being implemented as a semiconductor intellectual property and operate at run-time with the single queue. The motivation is that semiconductor chip or system on chip (SOC) handling a process is inherently faster than a software process.

***Double Patenting***

7. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

8. Claims 8, 9 and 10 of current application (Application No 10004608) are provisionally rejected under the judicially created doctrine of obviousness-type double

patenting as being unpatentable over claims 7, 8 and 9 of copending Application No. 10004078.

This is a provisional obviousness-type double patenting rejection.

9. Claims 5, 6 and 7 of current application (Application No 10004608) are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 4, 5 and 6 of copending Application No. 10004078.

This is a provisional obviousness-type double patenting rejection.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Salman Ahmed whose telephone number is (571)272-8307. The examiner can normally be reached on 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on (571)272-3174. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Salman Ahmed  
Examiner  
Art Unit 2666

SA



DANIGTON  
PRIMARY EXAMINER